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Software Engineering Tools

Goel-Okumoto Software Reliability Model

An automated version of the Goel-Okumoto Nonhomogeneous Poisson Process Software Reliability Model which runs on a PC under MS-DOS 2.11 or higher. Features include the ability to find maximum likelihood estimators of the parameters defining the model by using either the Newton-Raphson or Muller's method; a goodness-of-fit test based on a Kolmogorov-Smirnov statistic; estimation of remaining faults, cumulative failures, and reliability; and estimation of the optimal release time based on certain cost criteria. This program is distributed on MS-DOS floppy disk.



Receive additional tool information on-line at:

www.dacs.dtic.mil

Tempus: A Software Process Improvement Measurement Tool

An imperative of twenty-first century software development is continual process improvement. If you are standing still, you are losing ground. Developers and maintainers of real-time software are looking for ways to improve their ability to deal with both technical and management challenges as their systems become ever more capable, complex and interoperable. Recent advances in software measurement such as the Tempus measure provide real-time developers with a distinct advantage. The Tempus measure offers reduced costs in achieving real-time performance budgets and improved change management with impact analysis. As an added bonus, the Tempus measure offers a better way to track size than counting lines of code.

Advantages of the Tempus Measure

The Tempus measure represents a recent advancement in software measurement research. Because it is derived from source code, it provides real-time developers with the following distinct advantages:

- Reduced costs to achieve real-time performance budgets
- Improved change management with impact analysis
- Better way to track size



A Modus Operandi Product

Measuring Return-On-Investment from Software Process Improvement Database

The DACS ROI Database captures the benefits gained by software organizations that have undertaken improvements in software management via software process improvement. Results from in excess of 50 organizations are included in this database. Improvements in cost, schedule, reliability, employee morale, and customer acceptance resulting from these improvements have all been captured in this database.

A web based user interface is also provided to search the database to allow users to identify which types of goals (e.g., reduce cost, improve quality) they wish to understand, which types of improvements (e.g. inspections, cleanroom) are to be considered, and what period of time they wish considered for their query. The system will then collect all data that would be of interest and presents the data in an easy to understand format.



DACS ROI CD

All the resources you need for ROI analysis and reporting have been consolidated. The ROI Report, the MS Excel Spreadsheet, and the ROI Database have been bundled together and placed on a Compact Disk for your convenience.